

DISTANCE EDUCATION LEARNERS' PERCEPTIONS IN LEARNING COMPUTER TECHNOLOGY: IMPLICATIONS FOR PRACTICE

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Abstract

Distance education demand explosion since the 1990s is expected to continue over the next ten years. As technology gets better, distance education courses will increase both quantitatively and qualitatively and will eventually compete with the largely text- and instructor-based courses taught in all institutions. Using online questionnaires, semi-structured interviews, and lab and class observations to explore the perceptions of twelve K-12 teachers and administrators as they learned computer technology (QuizEditor JS, and WebQuest Generator) taught in two ways: Audio-video conferencing and online, four categories of learners emerged: (1) the mentor, (2) the mentee, (3) the illiterate, and (4) the "context bound (Atchade, 2002)." This study suggests alternative ways learner-learner interaction could be organized to maximize student learning and minimize teacher's work.

Introduction

The explosion in the demand for distance education since the 1990s is expected to continue over the next ten years. As technology gets better, distance education courses will increase both quantitatively and qualitatively and will eventually compete with the largely text- and instructor-based courses taught in all institutions. Many universities, colleges, and other organizations are pushing to offer distance education courses (Cooper, 2003). Knowledge of the distance learners' perceptions of the distance education process is limited in the literature. In most studies on the perception of distance education learners' focus was on students already enrolled in the courses (Ahern, 1997; Cooper, 2003; Jackson, 2000; Navarro & Shoemaker, 2000) and little attention was paid to students wishing to enroll in distance education courses. The findings in this study are not only relevant to students already enrolled but also to students planning to enroll in distance education and administrators/teachers in the business or in the process of becoming involved in the distance education business.

Research Questions and Methods

My specific research questions focus on: "How did ten licensed K-12 teachers and two administrators reflect upon their learning and the use of computer technology intended to enrich classroom teaching and delivered through either online medium or two-way audio video conferencing medium? 2) Were the differences among the participants evident in how they applied the computer technology in the classroom?" Thirty-three teachers and administrators were sent online questionnaires and the rate of response was four percent. The twelve teachers and administrators who voluntarily participated in this study were interviewed. Lab and class observations ended the collection of evidence.

Findings and Discussion

Four categories of distance learners were derived in the study: (1) the illiterate, (2) the mentee, (3) the context-bound, and (4) the mentor. A mindset seemed to be common to all members within each category. The state of mindset was the way each member perceived himself or herself as he or she approached distance-learning program. For example, an illiterate perceived

himself or herself as an illiterate. The same way, a mentee, a context-bound, or a mentor, perceived himself or herself as a mentee, a context-bound, or a mentor. In regard to the way each participant approached distance learning, I defined a continuum based on the evidence as reported by the participants. According to the mode of delivery and the self-perception of the participants in relation to the learning of technology, I inferred the continuum of distance learners (See Figure 1). The continuum was defined as a linear process a distance learner may go through passing from stage 1, stage 2, to stage 3. The Web of Distance Learners described the possibility learners did not move linearly from stage 1 to stage 3. The holistic approach (Merriam, 1998) described how distance learners might be perceived as they change categories.

Continuum of Distance Learners

The continuum is defined in three stages. Categories of distance learners move linearly from stage 1 to stage 3. The classification of distance learners into four categories suggests that participants who do not have self-confidence, who have a limited mindset, participants who were computer illiterates would rather enroll in a distance education with the two-way audio video conferencing as a mode of delivery while participants who could help or self-mentor would enroll in an online instruction. Online instruction required a total autonomy of a learner and a formal meeting between the faculty member and the students was not a part of the distance education experience. The continuum generated in Figure 1 showed how a member of illiterates could move upward to become member of mentors. At the beginning we see the illiterates. Because the illiterates have a lack of knowledge and competence about the computer technology, they may be unready to use technology. Computers for the illiterates seemed to be a substitute for paper or typewriter. Getting enrolled in a two-way audio video conferencing would allow them to be closer to the face-to-face instruction because of the real time, the faculty voice, and faculty body language that the two-way audio video conferencing offered. Then, it seemed that the two-way audio video conferencing would not alienate those illiterates from the physical presence that only the classroom instruction offered. The fact that they could see the faculty and ask questions may build their confidence. To be mentees, the illiterates must find a mentor and be ready, ready to learn. In the process of learning, the mentees could move to mentors if they were not hijacked in the process by a limiting situation. If the mentees were held by limiting situation, then the mentees would become context-bound until they had resolved the situation that held them back from their progression. When the situation was resolved, the context-bound could become mentors. The continuum as defined in terms of stages insinuated that a distance learner moved linearly from one stage to another stage. However, two participants' experiences (Rose and Ronald) suggested that participants might move backward, could skip some stages, or might not follow any stage at all. The next sections present those possibilities.

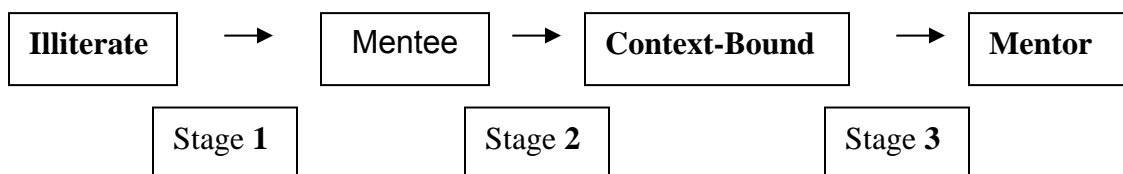
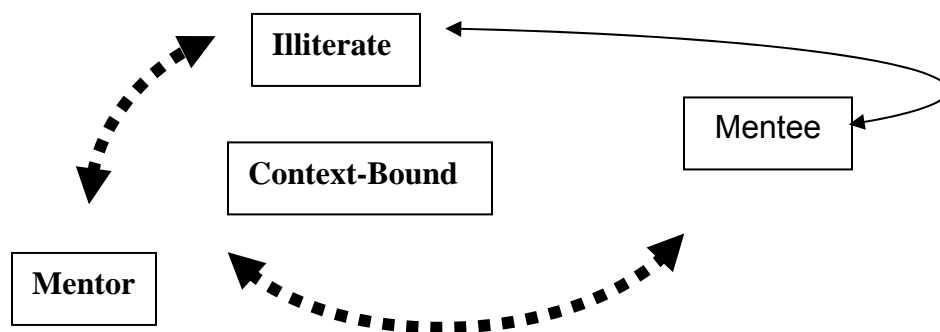


Figure 1: The Continuum of Distance Learners

The Web of Distance Learners

The description of the continuum as presented in Figure 1 showed that participants in this study changed their competency level from one stage to another linearly. The possibility of classifying Rose as mentor even though she requested help (while she could be classified as mentee) and the possibility of classifying Ronald as mentee (while he could be classified as mentor) allowed the researcher to consider Figure 2 of the web of distance learners. The Figure 2 with the bi-directional connections among distance learners showed the possibility for a category of distance learners to be in another category of distance learners without following the continuum presented in Figure 1. The dotted bi-directional connections were theoretical and were not observed in this study. The full connections (mentee/mentor) were observed considering the experiences of Rose and Ronald. The other full connections (illiterate/mentee) were a high possibility considering the study. As demonstrated in the next perspective, the technology change could easily bring back mentees to illiterates. Ronald's profile presented this high possibility. Because the dotted bi-directional connections were presented without any effort to demonstrate their validity, I made an effort to theorize the relationships among the categories of distance learners designated as "holistic approach to distance learners."



Keys: Bi-directional connections of Distance Learners
Possible bi-directional connections of Distance Learners

Figure 2: The Web of Distance Learners

The Holistic Approach to Distance Learners

I theorized how the progression from one category of distance learners to another category was operated. The possibility of regression from one category to another was found. I constructed the holistic study of the distance learners as represented in Figure 3 in two kinds of change from one category to another category of distance learners. The positive change was recorded on Figure 3 as Directions of Progression. The negative change was recorded as Directions of Regression. In this holistic approach to distance learners, positive change from one lower category (illiterate) to a higher category (mentor) was considered as a result of instruction. Negative change was brought about by technological change.

Directions of Progression. Readers are advised to look at Figure 3 as to follow the presentation of the direction of progression. Since few of changes were recorded during the study, I used a series of questions to show the directions of progression.

1) Illiterate/Mentor: Can An Illiterate Move Directly To Become A Mentor? I did not have enough evidence to formulate a comprehensive answer to this question. An illiterate may become a mentor with a lot of commitment to learn and change his or her limited mindset.

2) Illiterate/Mentee: Can An Illiterate Move Directly To Become A Mentee? This possibility was fully explained previously in the linear progression.

3) Illiterate/Context-Bound: Can An Illiterate Move Directly To Become A Context-Bound? A participant, already identified as illiterate, would have had another complicating factor to his or her illiteracy when he or she became context-bound. Again, context-bound was a situation in which a participant was involved and that was sufficiently salient to prevent the participant from making change in his or her learning.

4) Context-bound/Mentor/Mentee": Can a context-bound move directly to become a mentor? In this study, I contended that every distance learner was context-bound to some extent. The possibility that a context-bound moved to become mentor was explained in the linear progression before. A move from context-bound to mentee should be interpreted as positive. The definition of context-bound was critical in this occurrence.

5) Mentee/Mentor: Can a mentee move directly to become a mentor? The relationship between mentee/mentor was judged important in this study of distance education. In this research, I discovered that a mentor could be a mentee in another context. It has even appeared that among the most successful participants were those who intelligently used the dual position mentee/mentor. A mentee who moved directly to the mentor will prove the effectiveness of the mentorship (subsequently, instruction).

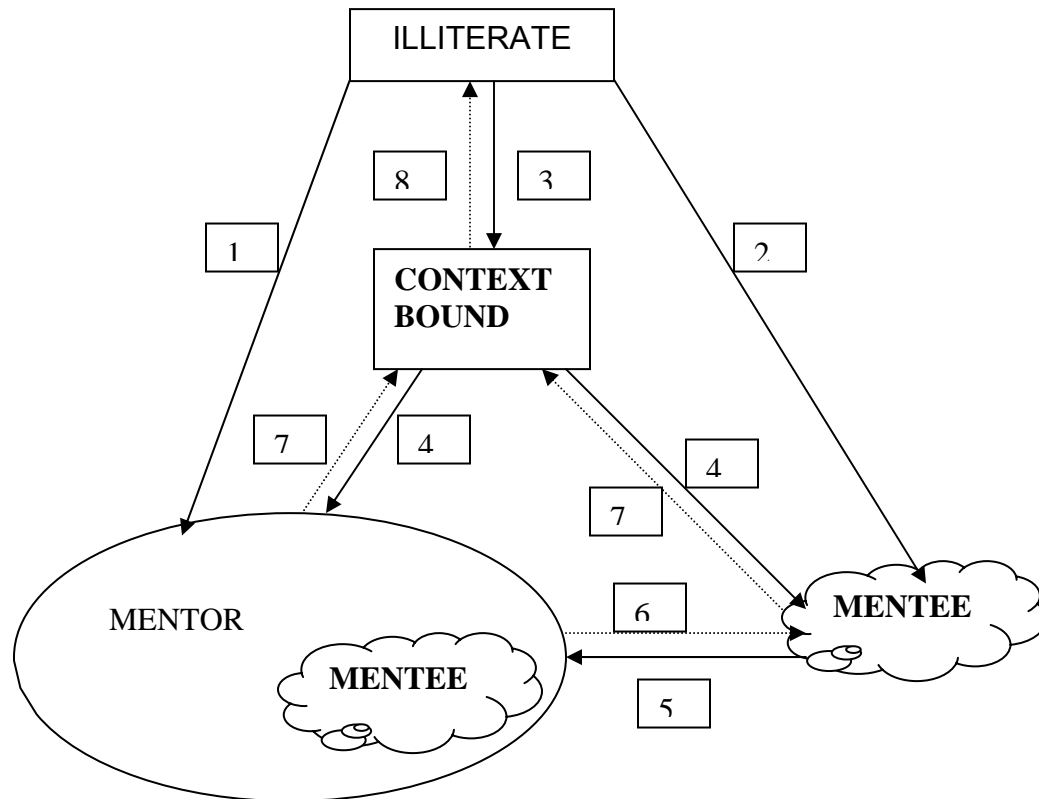
Directions of Regression. In Figure 3 dotted directional connections represented the direction of regression. I contended that with a rapid change in computer technology asserted by many scholars (Albrecht, 2001; Cole, 2000; Cuban, 2001; Nee, 2000), anybody in the society might become member of any category of distance learners at various points in our ongoing relationships to technology growth. The direction of regression was crucial in understanding human activity in relation with technology. The recognition of the regression would help not only to understand gaps between learners and technology, but also to tailor instruction in distance education settings. As previously enunciated, a series of questions would help to create interests in this debate of the regression.

6) Mentor/Mentee: Can a mentor become a mentee? Figure 3 was drawn to demonstrate that a mentor could be a mentee by incorporating a mentee within a mentor. A mentor who has become mentee will be aware of technology changes and will desire to adjust his or her skills and competencies to the new technologies.

7) Mentor-Mentee/Context-Bound: Can a mentor/mentee become context-bound? The answer to the question was yes. I contended that a mentor or a mentee could regress in context-bound with a technological change. The regression from mentor or mentee to illiterate, for example, was not possible without taking the necessary channel of context-bound. I argued that it does not make sense a mentee or a mentor becomes illiterate without any triggering event. I suggested that a technological change might symbolize a triggering situation or event. The mentor or the mentee was not aware of the technological change, or was not cognizant of that change yet. Therefore, the mentor or the mentee was context-bound.

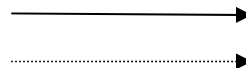
8) Context-Bound/Illiterate: Can a context-bound become an illiterate? The researcher said yes. The uniqueness of context (or situation) was applicable to any distance learners. A mentor or a mentee who was context-bound might eventually become illiterate. As shown in Figure 3, there was no direct connection in a regressive path between mentor/mentee and illiterate. In Figure 3, a mentor or a mentee could not become illiterate unless he or she had passed through the

context-bound. Context-bound might have been generated by a technological change a mentor or a mentee had to learn to keep up-to-date. Subsequently, mentor's and mentee's skills and competencies had become obsolete.



Keys: Direction of Progression

Direction of Regression



Names of Directions from 1 to 8

Figure 3: The Holistic Approach to Distance Learners

Conclusions And Implications to Practice

A proliferation of distance education offerings is a normal consequence of technology growth in quantity and in quality. The discovery of different categories of learners enrolled in distance education becomes a surprise in this study (especially the category of illiterates). In regard to this discovery, it is recommended that any institutions planning a distance education course should primarily ask the question: Who are those students wishing to take distance education course. The knowledge of illiterate, mentee, context-bound, and mentor would help tailor education to allow learner-learner interactions crucial in the online instruction so the interests of learners would be better served. If the interests of stakeholders are not served, whose interests should be served (Cervero & Wilson, 1994).

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